JUNE 24, 1950
Vol. 12 No. 13

AMERICAN FERTILIZER

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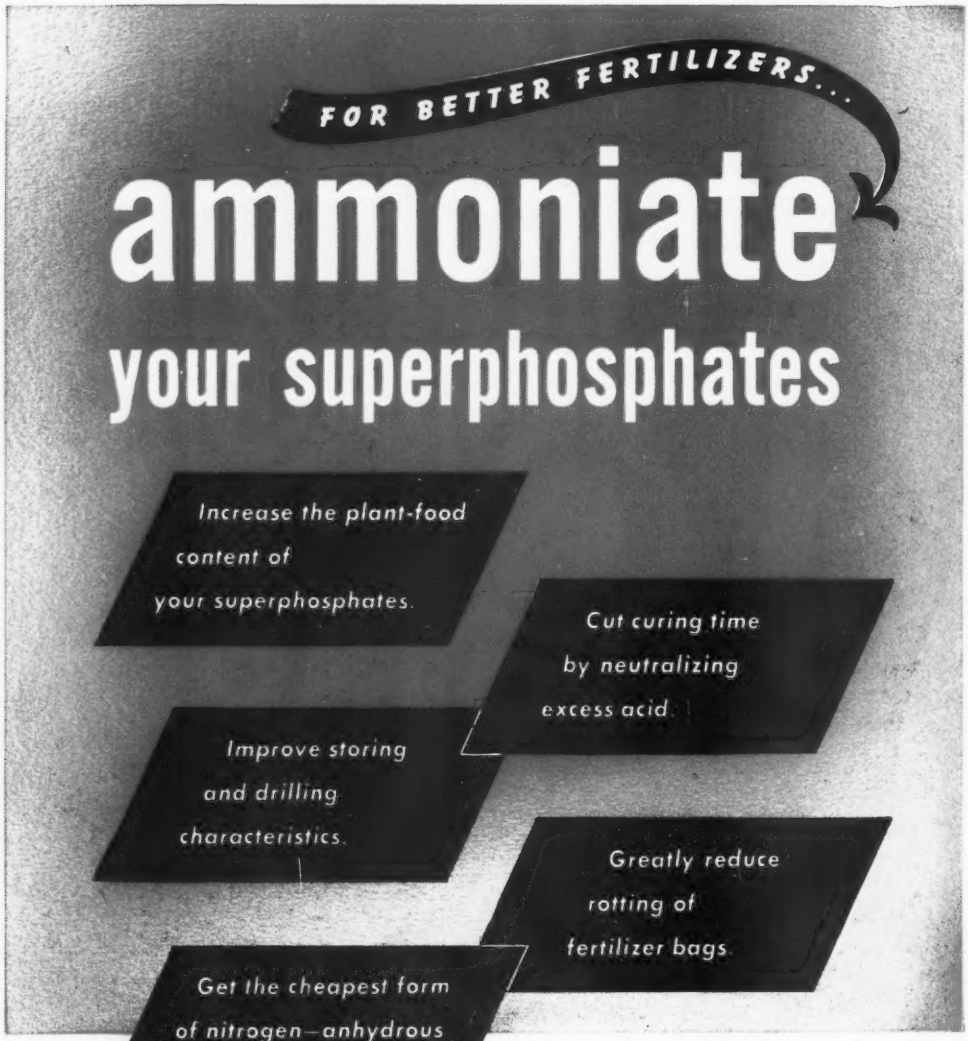
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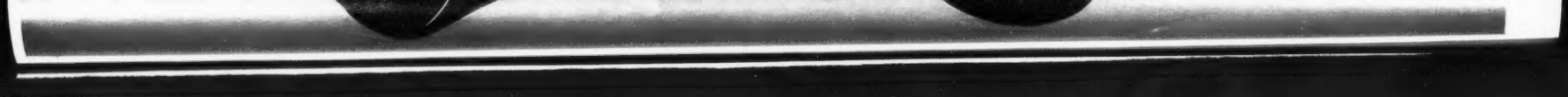

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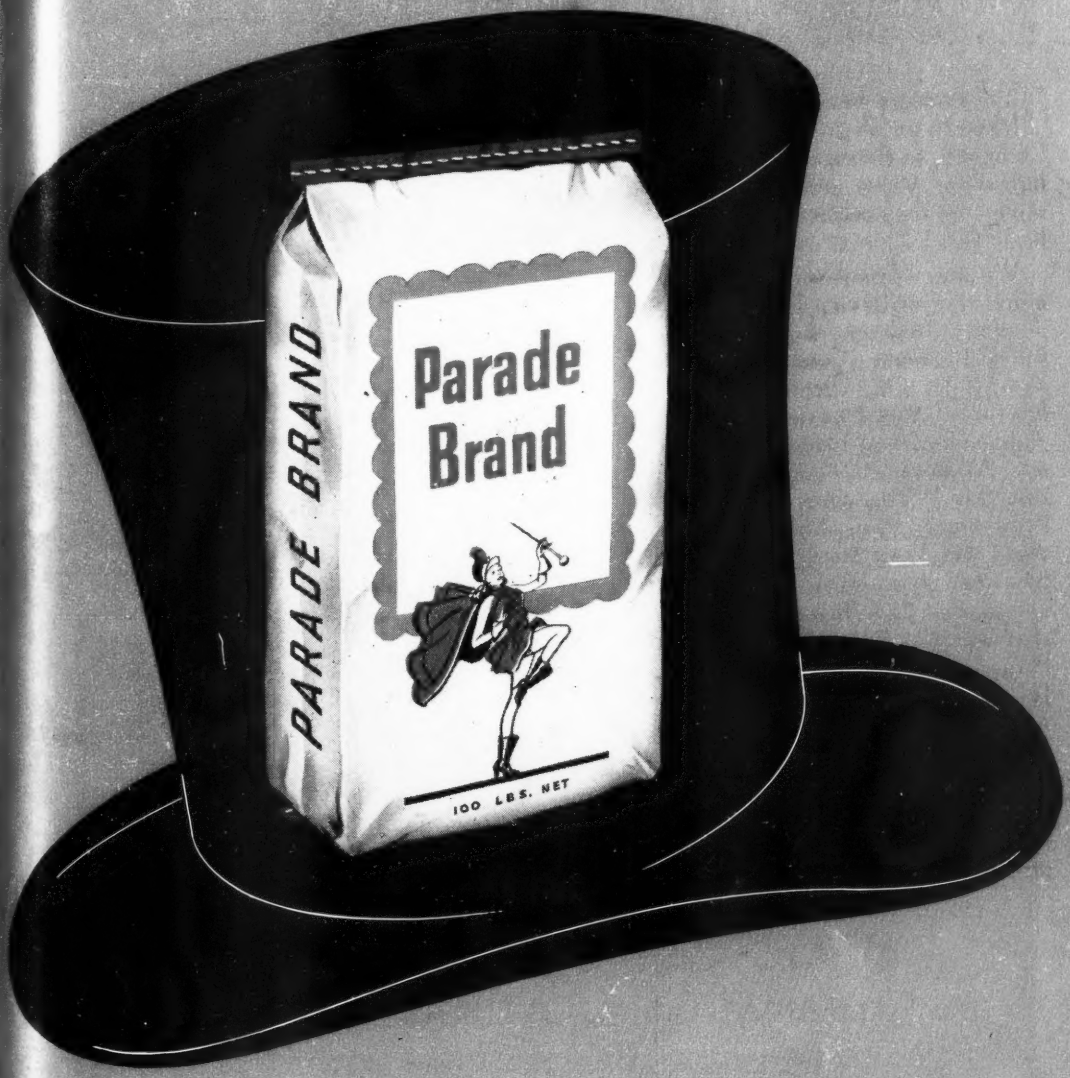

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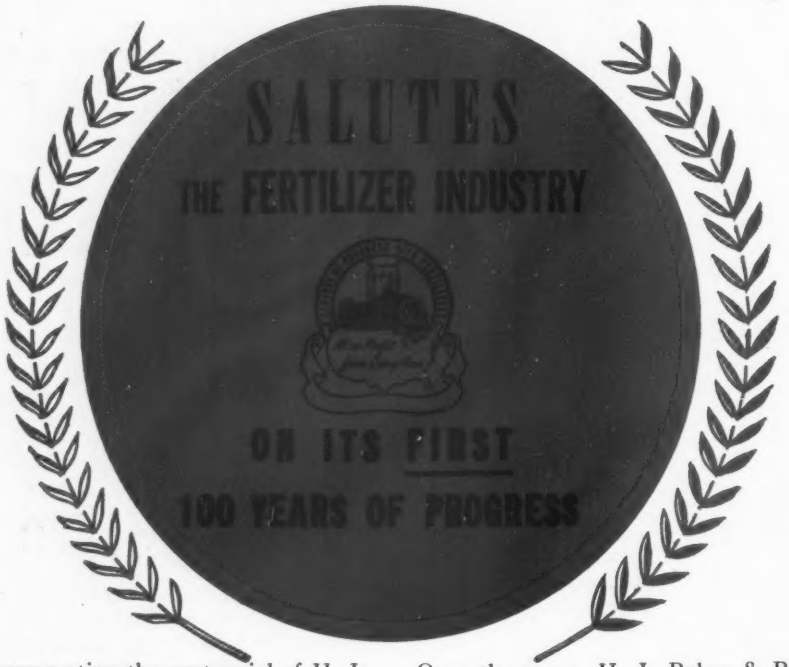
to the American Fertilizer Industry



In commemorating the centennial of H. J. Baker & Bro., our greatest satisfaction is derived from our long and intimate connection with the fertilizer industry. We are doubly proud that our 100-year milestone is passed at the same time as the industry we so faithfully serve.

Over the years, H. J. Baker & Bro. has sought in all corners of the earth practically every type of fertilizer raw material for distribution to fertilizer manufacturers.

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AMERICAN FERTILIZER

NATIONAL FERTILIZER ASSOCIATION

25th Annual Convention

WHITE SULPHUR SPRINGS

WEST VIRGINIA

"CENTURY OF PROGRESS" CELEBRATED . . .

FROM THE MOMENT the NFA convention group entered the dramatic entrance gates of The Greenbrier, West Virginia's celebrated year 'round holiday resort, until the last train left the White Sulphur Springs railway station, and the last automobile rolled onto the smooth

The Chairman from the South

surface of U.S. 60, there was a surging spirit of progress present in the splendid surroundings.

The old colored employee at the sulphur springs house, located on the rolling lawn, voiced the feeling of the entire seven hundred NFA members and visitors present for the meeting when he said, "Sure is a lots going on 'round heah this week!"

There was plenty going on . . . and everyone was taking part in all of the activities.

On the opening page of the program for the 25th Annual Convention of The National Fertilizer Association was the following; which certainly sets the scene for the words-and-pictures coverage AMERICAN FERTILIZER gave to the NFA meeting.

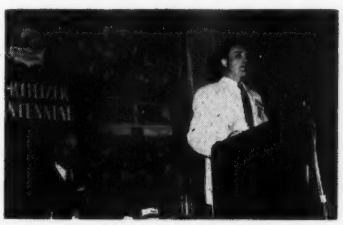
"A hundred years old! The candles on the festive cake are lighted. Let the celebration proceed.

The spirit of youth pervades every soul among us as the industry we so proudly represent observes its Centennial. During the past century the industry has grown steadily and has established itself as one of the most important in our Nation. But it is still in its youth and its best days of service lie ahead.

Here we are, at a green resting spot, in our long trek. A splendid program has been arranged for this biggest and best of all conventions of The National Fertilizer Association. A glance within this booklet will give you an idea of the distinguished leaders who will address the meetings, and of the many recreational events which await your pleasure.

May you remember our three-day birthday party for many years to come."

The President



AMERICAN FERTILIZER was on hand with pencil and camera, and certainly the story of this June

The Senator from the South

12–14 meeting is worthy of record in the history of our industry.

Everything was based on the idea of the special Centennial Convention of the fertilizer industry, and some splendid exhibits, illustrating the "Century of Progress" theme were displayed. The speakers were good, the entertainment was "top secret" until A. Norman Into opened the bag of tricks and introduced his "Countess."

A whopper of a cake was sliced on Tuesday evening by the ladies of the group and each lady searched eagerly in between nibbles for lucky

trinkets which entitled them to door prizes.

For the men a feature of the speaking sessions was the performance of the Quiz Kids (pictured in this issue of the magazine) on the subject of "A Century of Progress in Compounding and Utilizing Fertilizers." Despite the imposing title the members of the panel injected life and interest into the discussion, and Quiz Master H. B. Siems, Director of Research, Plant Food Division, Swift and Company did a fine job in keeping the verbal ball rolling.

Another high spot in the morning series of talks was the slam-bang shooting from the lip style of Ralph Robey, Chief Economist, National Association of Manufacturers. Mr. Robey, serious and swift with the words, pulled no punches in reminding the assembled group that we are "riding a period of inflation."

He used charts, as any good economist would, but he also used words with the wisdom of facts and figures to back them. His theme was sort of a "third man theme"—in other words he stressed it is up to American business and the American customer to keep the third man (Government control) from getting into the picture. The talk was dynamic, no doubt about that.

Mr. Robey said that "business in 1950 will be a little better than in 1948—and '48 was the best in history—it will go well above the 1949 total!"

As usual the best part of the meeting came in the informal talks in the lobby, on the golf course, down at the Casino during luncheons, on the terrace, and at the cocktail parties.

Drifting from one group to another a person could hear some fancy talk, some funny talk, and some straight-from-the-shoulder-talk, like this: . . . "Everytime I try to get him off in the corner to talk that XYZ fellow comes over and offers him another cigar. I hate cigars!" . . . "She's been coming to these conventions so long she even enjoys the talks at the general meetings!" . . . "Canasta! I thought we were playing bridge!" . . . "Next time I try to cut across on that hole I'll take a compass with me!" . . . "Tonight I'm going to bed by two even if I do miss out on this contract!" . . . "Stop being so slow on picking up those checks. You want folks to think the company is in bad shape!" . . . "Who's got an aspirin?" . . . "I don't think the second course is as hard as it used to be." . . . "Who's got two aspirins?" . . . "That crowd from XYZ certainly made a lot of noise. I'd move my room if they weren't so darn funny!"

(*Continued on page 30*)

Directors Elected

This year's election for NFA directors covered four directors-at-large and eight representing districts. Nine of the twelve were re-elected. The board now consists of the following: James E. Totman, Summers Fertilizer Company, Baltimore, chairman, and Louis Ware, International Minerals & Chemical Corporation, vice-chairman.

Directors are as Follows:

T. W. Allen, Attalla, Ala.; F. N. Bridgers, Wilson, N. C.; L. Graham Campbell, Cranbury, N. J.; Elbert N. Carvel, Laurel, Del.; Moultrie J. Clement Pensacola, Fla.; James W. Dean, Knoxville, Tenn.; J. H. Epting, Leesville, S. C.; B. B. Fall, Portland, Conn.; M. G. Field, Hattiesburg, Miss.; Ralph E. Fraser, Bangor, Maine; H. B. Fultz, Miami, Fla.; E. A. Geoghegan, New Orleans La.; L. D. Hand, Pelham, Ga.; E. B. Helgeson, Seattle, Wash.; M. S. Hodgson, Athens, Ga.; Ray King, Valdosta, Ga.; Maurice H. Lockwood, Chicago, Ill.; W. Newton Long, Baltimore, Md.; R. D. Martenet, Indianapolis, Ind.; C. R. Martin, Dayton, Ohio; Walter E. Meeken, Boston, Mass.; John A. Miller, Louisville, Ky.; J. L. Nichols, Sumter, S. C.; Weller Noble, Berkeley, Cal.; J. E. Nunnally, Atlanta, Ga.; J. H. Owens, Roanoke, Ala.; John E. Powell, Columbus, Ohio; C. T. Prindeville, Chicago, Ill.; E. S. Russell, South Deerfield, Mass.; A. A. Schultz, Reading, Pa.; C. D. Shallenberger, Shreveport, La.; J. E. Totman, Baltimore, Md.; Louis Ware, Chicago, Ill.; A. W. Weaver, Norfolk, Va.

"Jimmy" Totman, New Chmn. of the Board of NFA

Announcement was made that D. S. Murph, who has served the association for 14 years as counsel, secretary, and treasurer, would resign August 1.

The man who knew the Polish Countess

Annual Convention Address

. . . "you and I are prone to stick to our business knitting and let the country run itself." . . .

By RAY KING
Chairman, Board of Directors
The National Fertilizer Association

Businessmen must realize that, if our country is to be preserved as the home of private initiative, then they must be willing to give of their time and ability to active participation in political affairs.

Ray King

IT has been my privilege, through decision of the Board of Directors, to serve you for the past two years as Chairman of the Board. I want to make acknowledgment at once of the fine support I have had from members of the Association, members of the Board, and members of the executive staff. My two years of intimate connection with the Association's operations have made me prouder than ever to be a part of a wonderful organization like the NFA and to participate in the constructive work it has been and is doing for the fertilizer industry. The present NFA was formed in 1925 from a combination of the old National Fertilizer Association, which had its beginnings in 1894, and the Southern Fertilizer Association, which was organized in 1906. Thus our Association, with its predecessors, has a record of more than 50 years of continuous service to the fertilizer industry—a record of which we are all proud.

One substantial development of the past two years is that the industry's production has caught up with the demand for its goods. Producers of nitrogen and potash have demonstrated the ability of private enterprise to meet and solve problems of capacity and production which a few years ago no one even thought of as possibilities. As to phosphoric acid, ever since the beginning of the industry there has been plant capacity for the manufacture of superphosphate. During the war, demand for superphosphate more than doubled. Inasmuch as sulphuric acid was essential in the manufacture of many munitions, which of course had first call, this material became the limiting factor in the production of superphosphate. In the postwar period, utilization of some of the sulphuric acid from certain Government-built war plants for superphosphate production relieved this shortage.

Another significant segment of the past two years' history is the use of radioactive phosphorus as a research tool—an activity which derived its initial momentum and financial support from a group of fertilizer men. It involves the "tracer" technique and is giving us authentic information as to sources, time of application and method of placement, making our already valuable product a still greater contribution to agriculture.

This period has seen also a great intensification of interest in grassland agriculture. In the North, East, South and West it is recognized that grass is a highly profitable crop, is peculiarly appropriate for acres taken out of cultivation, and conserves the land and saves it for future generations. Grass, like other crops, demands plenty of fertilizer for optimum results and presents a splendid potential for expansion of fertilizer use.

The newer agricultural areas of our country present a continuously and increasingly interesting fertilizer picture. Among major agricultural achievements which you and I have seen is the introduction of hybrid corn. It accounts for practically all production in the Corn Belt and it is currently finding its way wherever

*As delivered at the 25th Annual Convention, The National Fertilizer Association, White Sulphur Springs, W. Va., June 13, 1950.

corn is grown. Hybrid corn is a heavy feeder—farmers have found that it removes enormous quantities of plant food which must be replaced with fertilizer.

The past few years have witnessed extensive research dealing with the placement of fertilizer, particularly in the West. Increase in yield resulting from localized placement of fertilizer on calcareous soils has been phenomenal. These results will undoubtedly stimulate the use of phosphatic fertilizers.

Nor has potash been overlooked. Just recently the California Experiment Station has found that there is a direct relationship between the potash content of the leaf and the size of the citrus fruit.

Liquids in the West

The West continues to be a heavy user of liquid fertilizers, particularly nitrogen. In this area, where nitrogen is so essential to a successful agriculture, its efficient use is being promoted through the finding and utilization of different application methods suitable to different conditions.

Ever since the great naturalist Pliny more than 19 centuries ago recommended the use of ashes and animal manures for crops, men have been on the prowl for information about plant foods—what they are, where they come from, what can be done with them, and what they do. We are today celebrating the 100th anniversary of the compounding of fertilizers in America. That century, particularly the latter half of it, has seen wonderful progress in the study and utilization of fertilizers, advancement keeping pace with the strides of science in other fields. Truly it has been a "century of progress," . . . progress affecting not the industry alone but our whole economy as well—today more than one-fifth of this country's total crop production is attributable to the use of fertilizers.

Jump in Tons

Fertilizer consumption has jumped from a little more than 2,000,000 tons in 1900 to 16,500,000 tons in 1949—an increase of 650 per cent. This increase resulted from two factors: first, an expansion of fertilizer-use acreage as soils of the newer agricultural areas became deficient in one or more plant foods; second, increase in per-acre application to expand agricultural production and lower its cost.

Mr. King's Talk was a high spot in a Convention filled with high spots. It will be worthwhile to re-read the comments of our chairman

Both of these factors reflect the fact that fertilizer is about the best investment the farmer can make. As illustrations, $1 invested in fertilizer today brings a return of $4.42 in wheat, $11.62 in tobacco, $6.70 in corn, $8.48 in cotton, and $7.26 in milk. At the present time the USDA index number of prices which farmers pay for fertilizer is 144 as compared with 251 for prices they pay for all commodities and 241 for prices which they receive for their products. It is a plain story and one which we should tell again and again.

Critical Study

This seems an appropriate place to refer to some rather anomalous data contained in a fertilizer study recently released by a Federal Government agency. This study was critical of fertilizer costs; yet in the breakdown which it gave of delivered-to-the-farm fertilizer prices for two grades of fertilizer in three different areas in the spring of 1941 the "mixer's profit" showed an average of less than 70 cents per ton.

Within the past 30 years the plant-food content of fertilizer has been increased more than 50 per cent—from 13.90 per cent in 1920 to 22.5 per cent in 1949. This is substantial progress in a constructive direction for cutting down the per-unit cost of plant food. It has been achieved by patient and persistent effort on the part of fertilizer manufacturers, some farmers, and State and Federal agricultural scientists and officials.

It has met with perfectly natural resistance on the part of many farmers, who hesitate to drop known and long-used grades from which excellent results have been obtained, in favor of grades that are to them new and untried and that involve higher prices per ton. In the absence of State laws providing for mandatory grades, the transition to higher grades must come through education, the processes of which are sometimes gradual rather than spectacular. But the industry is moving forward soundly in this regard.

In all thinking on this subject it should be borne in mind that practical considerations set a limit on the total amount of plant food that can be put into a ton of fertilizer.

No Pure Form

It is well known to all of you, of course, that for physical or chemical reasons the plant-food elements cannot be used in their pure form in making fertilizer. And even if we should manufacture, for instance, a mixed fertilizer by taking approximately a third of a ton of the highest grade of common solid material furnishing nitrogen, namely, ammonium nitrate (33⅓ per cent), a third of a ton of concentrated superphosphate (45 per cent P_2O_5), and a third of a ton of muriate of potash (62 per cent K_2O) and mix them together in the presence of a few pounds of anhydrous ammonia for curing purposes, we would be far from having a 100 per cent plant-food fertilizer. Such a mixture would contain about 12 per cent nitrogen, 15 per cent available phosphoric acid, and 20 per cent potash, a total of only 47 per cent of plant food. Even though some anhydrous ammonia was used in such a mixture to assure its mechanical condition, it would by no means be sure to remain drillable. It would easily become hard and lumpy on exposure to the air, and the possibility of unsatisfactory storage is great.

A ton of fertilizer of given specifications would cost the farmer about

(*Continued on page 24*)

Dr. Coleman

Dr. Russell Coleman Ask:

"Isn't One Hundred Years Long Enough?"

Speaking with force and sincere purpose the NFA president predicts . . . next 100 even better!

ABOUT 100 years ago in Europe people became concerned over the "industrial revolution." Because machines were beginning to take the strain and sweat off men's backs, Karl Marx and his followers prophesied doom, predicting that capitalism under the machine age would gobble up all the wealth leaving the working man destitute unless all people could be organized on a socialistic basis.

Brief History

At this time America was too busy with its own affairs to pay attention to such nonsense. The main concern in the United States was how to make itself strong enough to withstand its enemies and at the same time establish a government that would give its people personal liberty. To do this, American pioneers in government leaned heavily on the philosophy of Jefferson who, in 1826, had said: "I have no fear but that the results of our experiment will be that men may be trusted to govern themselves without a master. Sometimes it is said that man cannot be trusted with the government of himself. Can he then be trusted with the government of others or have we found angels in the form of kings to govern them? Let history answer this question."

History has answered the question. Only compare the progress made under the negative philosophy of Marx, where government planners direct the lives of its citizens and where every attempt is made to discourage man's initiative, with the positive philosophy of Jefferson where man is free and encouraged to develop his own talents. How well our Nation has prospered with the industrial revolution is evident by comparing conditions today with those existing 100 years ago.

1. In 1850 the United States had only 23,000,000 people, only 33 per cent of whom were gainfully employed. Today we have 150,000,000 with about 40 per cent gainfully employed.

2. Then animals and men did 70 per cent of the Nation's work; machines only 30 per cent. Today animals and men do 6 per cent; machines 94 per cent.

3. The work-week at that time was 70 hours and the average worker's output per hour was 27 cents worth of goods and services measured in present-day buying power. Today the average work-week is 40 hours and man produces an average of $1.40 per hour.

4. A century ago 80 per cent of our people were required to live on the farm to produce life's necessities; other employment opportunities were almost nonexistent. As a result of industrial developments, today only 18 per cent of our people live on the farm.

5. As a matter of interest, Detroit, symbolic of the industrial revolution, had only 9,102 people in 1850. Today this city, because of industry, has almost 2,000,000 people contributing to the welfare of our Nation.

Yes, the machines which Mr. Marx feared have been responsible for the largest labor force working the shortest hours at the highest wages in world history. Suppose Americans in 1850 had read the communist manifesto of Karl Marx and had taken it seriously. What would have been the result? The continual process of dividing the wealth would have discouraged Edison and others like him from creating new wealth, would have prevented the accumulation of capital to invest in the mass production of machines, without which most of our labor would still be required on the farm to produce the bare necessities of life. Certainly it would have been impossible for industry to provide $8,000 worth of tools for each

(Continued on page 20)

. . . "ISN'T 100 YEARS LONG ENOUGH TO CONVINCE OUR PEOPLE THAT PRIVATE INDUSTRY IS A VITAL AND ESSENTIAL PART OF AMERICAN GOVERNMENT?" . . .

*Address at the 25th Annual Convention of The National Fertilizer Association, White Sulphur Springs, W. Va., June 13, 1950.

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Vol. 112 JUNE 24, 1950 No. 13

INCLUDED IN THIS ISSUE IS A SPECIAL PICTURE SECTION. EXTRA PRINTS OF PHOTOGRAPHS ARE AVAILABLE BY WRITING THE EDITOR FOR COPIES

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The cover illustration depicts both the business and pleasure sides of the recent NFA Convention at White Sulphur, W. Virginia. In the lower right picture you see the Centennial Birthday cake which was cut by Mrs. Ray King at the annual banquet.

EDITORIAL
Research

A man stood up and said something that was very important at the recent NFA Convention. He said words that made sense and he spoke of plans that will make a better future for the fertilizer industry.

Dr. Russell Coleman was the man and the new program of research and education in the use of plant food was the idea of which he spoke . . . everyone listened, for this mild-mannered Southerner was saying what many had thought for a long time.

It is the NFA's answer to the ever-present problem of supply and demand in fertilizers.

Briefly the idea is this: Creation of a fertilizer foundation for research and education. The program will be financed by producers of fertilizers and others having a particular interest in the plant food field.

Everything is based on the ancient idea of "being part of a team." As we say in the present day business jargon, "to coordinate and consolidate the various activities."

This is just a top-level way of saying what AMERICAN FERTILIZER has been repeating in black and white from issue to issue.

We need good, smart, progressive, long-range plans for the industry.

NFA is now ready to give such a program to us—with our help.

Unlike all the rest of the soft pap coming out of Bedlam-On-The-Potomac today, this NFA venture is designed to be self-supporting—for which a big hooray and rounds of applause to the NFA's board of directors.

Here's a brief run-down of the seven pillars of wisdom on which this foundation rests.

1. Area potentialities of the fertilizer market.
2. Fertilization practices.
3. Expanded study of the distribution methods of the fertilizer folks.
4. Outlook for the use of plant food—and this includes an attempt to compile data that are correct.
5. Education of the farmer in the use of the new materials, ideas and applications.
6. Develop new and bigger markets.
7. Work much closer with the experiment stations and their results.

. . . that's the big news from White Sulphur, so what do you think and what are you going to do about it? —THE EDITORS

NAMES IN THE NEWS . . . .

POLITICS AND PULCHRITUDE

Governor Gordon Browning of Tennessee congratulates Mrs. W. W. Dillard of Memphis for winning the National Dressmaking contest held in connection with the recent Golden Anniversary of Bemis, Tennessee. Mrs. Dillard's dress was made of Bemilin, cotton bag material manufactured at Bemis Cotton Mill.

BRUNN TO ATLAS

Lynn K. Brunn has joined the technical sales staff of the industrial Chemicals Division of Atlas Powder Co., Wilmington, Del., the company announced. He will be a consultant on the *line of emulsifiers* for the agri-*culturat chemicals* field, and will contact Federal and State experiment stations on formulations.

NEW CHEMICAL DIRECTORY

A new edition of the *World Chemical Directory* has been published by the Atlas Publishing Co., 425 W. 25th St., New York 1, N.Y. The directory contains 700 pages, listing over 18,000 firms located in every important country in the world which are exporters, importers and manufacturers of chemicals, drugs, plastics and oils. Price is $10.

AMERICAN CYANAMID ANNOUNCES STAFF MOVES

Dr. Jack T. Thurston and Dr. Joseph H. Paden have been advanced to new positions by American Cyanamid Company according to a recent news release.

Dr. Thurston, new administrative director of the Stamford research laboratories, has been director of the research division since 1945. He joined Cyanamid's Stamford laboratories in 1937 and has specialized in the development of organic nitrogen compounds. During the war he served as a civilian with the Atomic Energy Commission and the Army and Navy. In 1946, he was loaned to the Department of Commerce and made an extended trip to Germany where he investigated phases of the chemical industry, including insecticides, organic chamicals and plastics.

Dr. Paden, the new director of the research division, joined Cyanamid in 1937 and was assigned to resin research. He has specialized in development of nitrogen derivatives by high pressure reactions. In 1945, he was appointed assistant director of the research division of the laboratories, a post which he has held until the present time. Appointments became effective June 1.

OPEN HOUSE. . .

The Stamford (Conn.) Research Laboratories of American Cyanamid Company were opened to the public May 19 for the first time since their establishment in 1936. The open house was arranged to give friends and associates of the company an insight into the role of scientific research in the development of Agriculture. With the major exceptions of the research and development laboratories of the Calco Chemical Division, Bound Brook, N. J., and the Lederle Laboratories Division, Pearl River, N. Y., virtually all of Cyanamid's research is conducted at Stamford.

The greatest man is he who makes the least difference between himself and others.

If you do not control yourself and save when it would be comparatively easy, others will control you!

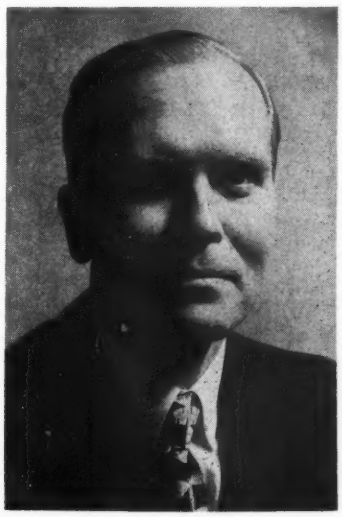
—Arthur Brisbane

GEORGE E. HARVEY

Mr. Harvey's appointment was in the June 10 AMERICAN FERTILIZER as a pioneer of the packing, and display field. Arkell & Smiths are to be congratulated on their selection of George Harvey as New England Sales Manager.

A & S APPOINTS NEW PACKAGING ENGINEER

Arkell & Smiths, multiwall paper bag manufacturers, have announced the appointment of Mr. R. P. Kessler as Packaging Engineer. Mr. Kessler is a member of the Paper Shipping Sack Manufacturers Association Technical Committee. He will make his headquarters at Canajoharie, New York, and will be in charge of the A & S Packaging Laboratories maintained there.



R. P. KESSLER

THE WINNERS!

SIX TOURNAMENTS enlivened the NFA's Centennial Convention at White Sulphur. Listed here are the winners of all prizes in the Golf (men and women), Bridge, Canasta, Tennis and Horseshoe contests.

The St. Regis Paper Company donated the bridge and canasta prizes; the NFA gave the door prizes.

Bridge and Canasta

June 13

Bridge: Mrs. L. G. Black, Corning, Ark.; Mrs. Dallas D. Culver, Seaford, Del.; Mrs. James D. Dawson, Jr., Houston, Texas; Mrs. C. B. Dunne, New York City; Mrs. John Fletcher, Atlanta, Ga.; Mrs. T. L. Jones, Columbus, Ohio; Mrs. B. M. Machen, Montgomery, Ala.; Mrs. C. H. MacDowell, Winter Park, Fla.; Mrs. C. W. McNeilly; Mrs. W. J. Murphy, New York City; Mrs. Jack Snyder, Topeka, Kansas; Mrs. C. R. Sparks, Pittsboro, Ind.; Mrs. Louis Ware, Winnetka, Ill.; Mrs. J. J. Weldon, Indianapolis, Ind.; Mrs. Travis S. Whitsel, Atlanta, Ga.

•

Canasta: Mrs. Sue Dinges, Kansas City, Mo.; Miss Nancy Lamb, Pittsburgh, Pa.; Mrs. J. R. Mell, Atlanta, Ga.; Mrs. John Perryman, Newnan, Ga.; Mrs. F. H. Totman, Houlton, Me.

•

Door Prizes: Mrs. M. W. Cole, Norfolk, Va.; Mrs. Tom Ware, Chicago, Ill.

June 14

Bridge: Mrs. J. P. Brinton, Jr, New York City.

•

Canasta: Mrs. E. A. Geoghegan, New Orleans, La.; Mrs. L. E. Little, Indianapolis, Ind.; Miss Sue Mitchell; Mrs. Weller Noble, Berkeley, Calif.

•

Door Prize: Mrs. J. W. Rutland, Chicago, Ill.

Tennis Finals

Men's Singles: George H. Dunklin of Planters Fertilizer Company, Pine Bluff, Ark., defeated Dean R. Gidney, U. S. Potash Co., New York City. Men's Doubles: George H. Dunklin and Everett C. Horne, Bradley & Baker, New York City, defeated Richard A. Brown, Dickerson Co., Philadelphia, Pa., and M. Tegtmeyer, Synthetic Nitrogen Products Corp., New York City. Ladies' Singles: Mrs. G. Frank Seymour, Goldsboro, N. C., defeated Mrs. W. R. Morgan, Chicago, Ill. Mixed Doubles: Mrs. G. Frank Seymour and M. Tegtmeyer defeated Dean R. Gidney and Mrs. Albert Baker, Jr., New York City.

Women's Golf

Low gross: Winner, Mrs. J. H. Jones, Decatur, Ala.; runner-up, Mrs. A. Norman Into, Lake Forrest, Ill. Low net: Winner, Mrs. R. W. Goldthwaite, El Dorado, Ark.; runner-up, Mrs. D. D. Culver, Seaforth, Del.

Kickers handicap: Winner, Mrs. J. F. Corkill, New York City; runner-up, Mrs. F. R. Dulany, Savannah, Ga. Golfers' putting: Winner, Mrs. E. A. Geoghegan, New Orleans, La.; runner-up, Mrs. Edward M. Kolb, New York City. Non-golfers' Putting: Winner, Mrs. W. G. Gayle, Lake Charles, La.; runner-up, Mrs. W. S. Tyler, Sulphur Springs, Texas; consolation, Mrs. Harold Trammell, Texarkana, Texas.

Horseshoe Pitching

Doubles: W. E. Schaffinet, Stedman Foundry and Machine Company, Philadelphia, Pa., and William Lehmann, Chilean Nitrate Sales Corporation, White Plains, N. Y.; runners-up, M. G. Field, Meridian Fertilizer Factory, Hattiesburg, Miss., and T. B. Athey, Albemarle Paper Manufacturing Company, Richmond, Va. Singles: H. G. Cunningham, Tennessee Corporation, Atlanta, Ga.; Jay B. Ford, U. S. Potash Company, New York City, runner-up.

Men's Golf

June 12

Low Gross: Winner, T. L. Jones, Arkell & Smiths, Columbus, Ohio; runner-up, Watts Gunn, Chilean Nitrate Sales Corporation, Atlanta, Ga. Medal play: Winner, Roy E. Jury, Arkell & Smiths, Kansas City, Mo.; runner-up, J. F. Corkill, Pacific Coast Borax Company, New York City. Match play: Winner, T. V. Hough, Kershaw Oil Mill, Kershaw, S. C.; runner-up, William W. Chadwick, International Min-

(*Continued on page 26*)

BONE MEAL TANKAGE BLOOD
SHEEP—COW—POULTRY MANURE
CASTOR POMACE NITROGENOUS
GROUND TOBACCO STEMS HOOF MEAL
ALL FERTILIZER MATERIALS
FRANK R. JACKLE
405 Lexington Avenue New York 17, N. Y.

FERTILIZER MATERIALS MARKET

NEW YORK

Export Orders for Sulphate of Ammonia Taking Some of Surplus Stocks. Interest Slackens in Fertilizer Organics and Prices Decline. No Change in Superphosphate Prices Expected Potash Being Contracted For in Satisfactory Volume with Foriegn Competition Reported.

NEW YORK, June 21, 1950

Sulphate of Ammonia

A considerable movement of export orders is reported and is said to be helping the domestic situation as far as the producers are concerned. Contracts are now being made by the coke producers for shipment over the coming fertilizer year and current prices range from $32.00 to $37.00, according to shipping point.

Nitrate of Soda

No price change has been reported in this material and present movement is rather slow.

Ammonium Nitrate

While no actual price changes have been noted as yet, it is thought there may be some reduction in the price of this material to meet the reduced price of sulphate of ammonia.

Nitrogenous Tankage

Producers are maintaining pre cent price schedules and some plants are sold out for the next 90 days.

Castor Pomace

Material is being sold for shipment over the next 60 days at $30.50 per ton, f.o.b. production points, but no material is offered for shipment beyond this time. Some sales of foreign material have been noted.

Organics

With the fertilizer shipping season about over in most sections, organics displayed a slightly easier tone and the fertilizer grade showed little interest in material for prompt shipment. Blood was offered at $6.00 per unit of ammonia ($7.29 per unit N) and tankage at about $6.50 ($7.90 per unit N) f.o.b. Eastern shipping points. Even the feed trade were not anxious to take on supplies at these figures which are lower than in some time. Vegetable meals maintained a firm tone with soybean meal, cottonseed meal and linseed meal in demand.

Fish Meal

This material was in a rather weak position for quick shipment as the menhaden fishing season is now on and the catch has been reported as fairly heavy in some sections. Fish meal is offered at $125.00 to $128.00, f.o.b. fish factory for prompt shipment, and for summer shipment on a "when and if made basis" could probably be bought for less. Imported fish meal continues to arrive at various ports.

Bone Meal

Demand has recently picked up in the fertilizer grade but the demand from feeding interests remains quiet. Several lots of imported material have recently arrived for the feed trade.

Hoof Meal

Last sales made on the basis of $6.00 ($7.29 per unit N) f.o.b. Chicago, with interest slow for nearby shipment.

Superphosphate

No price changes are looked for in this material because of the present high manufacturing costs and increases which have taken place since last year. Triple superphosphate still remains in short supply in certain sections. Some additional business has recently been booked to export ammoniated superphosphate.

Potash

Producers are still making contracts for the coming year and seem to feel satisfied with the response from the buyers. Foreign material is still being offered at prices to compete with the domestic material.

PHILADELPHIA

Market Reflects Post-Season Quiet. Little Demand for Organics. Potash Contracts for Next Season Satisfactory.

PHILADELPHIA, June 21, 1950

The general market continues rather dull, although the potash producers have been busy writing up contracts covering the '50–'51 season. Organics are in a particularly weak position, with no real demand whatever.

Sulphate of Ammonia.—Situation is quiet with normal demand for the coke-oven product, and the convertor's grade well under contract.

Nitrate of Soda.—Movement is not too active and is rather disappointing to some sellers. No price changes are reported.

Blood, Tankage, Bone—These organics are in a real weak position with no buying demand. Any suggestion of price would be purely nominal, as the market is practically dead.

Castor Pomace—This material now seems to be in a more favorable supply position with little or no demand. A price reduction is possible.

Fish Scrap—This reflects the same position as the other organics. Foreign offerings, added to the domestic new catch now reaching the market, tend to create a surplus supply which will likely result in further price decline. Scrap is quoted nominally at $120.00 to $122.50, and $135.00 suggested for domestic menhaden meal.

Phosphate Rock—Present move-

ment consists principally of deliveries against contracts, and while there is no great demand, the market is fairly firm.

Superphosphate—Market is quiet but not by any means weak. While the supply of normal grade is on the average satisfactory, no large surplus exists. The tight position of triple superphosphate is reported only slightly easier. No price changes are indicated.

Potash—Shipments are moving steadily on contracts, and producers are busily occupied writing contracts for the new '50–'51 season. It is expected the demand will be somewhat in excess of domestic production, with increased offerings from Europe.

CHARLESTON

Little Carry-Over of Material Stocks. Contract Business for 1950–51 Active. Organics Market Dull

CHARLESTON, June 19, 1950

Producers of the prime ingredients —nitrogen, phosphates and potash —are now making contracts for the new season, having completed the past season with available stock practically cleaned out.

Organics—The market on organics is rather dull at present with no interest in prompt shipment, and most producers comfortably sold for the fall and spring period. Domestic nitrogenous tankage is nominally $3.75 to $4.10 per unit of ammonia ($4.56 to $4.98 per unit N) in bulk, f.o.b. production point, for fall and spring shipment. Imported nitrogenous for summer and fall shipment is around $4.80 per unit of ammonia ($5.83 per unit N) in bags, c.i.f. Atlantic ports, with offerings light.

Castor Pomace—Producers are comfortably sold through August with no offerings for shipment beyong August. Last sales were made at $30.50 per ton in bags, f.o.b. Northeastern production points. Imported material is offered at around $38.50, c.i.f.

Dried Ground Blood—Blood market continues stagnant at figures around $5.75 to $6.00 per unit of ammonia ($6.99 to $7.29 per unit N) in bulk, f.o.b. Chicago.

Potash—Considerable tonnage from domestic sources has been contracted for the 1950/51 season. It is reported that the French imported material has been sold for whatever tonnage is expected at this time to be brought in. Prices at the ports are competitive with the delivered carload prices of the domestic producers.

Ground Cotton Bur Ash—Material testing 30/40 per cent K_2O has been sold for fall and spring shipment at around 65 cents per unit of K_2O in bulk, f.o.b. Texas production point. One of the major producers has withdrawn from the market temporarily as a result of comfortable sales.

Phosphate Rock—Demand continues seasonal and prices are firm.

Superphosphate—Except for certain Southern producers, superphosphate stocks at the end of the season were practically cleaned out. Demand is strictly seasonal.

Sulphate of Ammonia—There is no unusual activity in coke-oven sulphate of ammonia and producers of synthetic material are well sold, having taken considerable export business.

Ammonium Nitrate—Demand continues seasonal and sufficient to absorb available supplies. Prices continue unchanged.

Nitrate of Soda—Movement is below seasonal expectations. Supplies are comfortable and prices unchanged.

CHICAGO

Prices Show Market Decline in Organics Market Without Stimulating Buying Interest

CHICAGO, June 19, 1950

The market on animal ammoniates in this area experienced a definite change of complexion. During the past two weeks prices have declined rather sharply and it cannot be said that the decline has reached its limit. Buying interest in narrow and reduction in prices of both raw materials and finished products has retarded trading rather than acting as a stimulant. Present indications are that the immediate future does not hold much promise of the market becoming stabilized.

The list prices on meat scraps range from $95.00 to $105.00 per ton, depending upon protein content and location of material offered. Digester tankage, 60% protein, ranges from $90.00 to $98.00 per ton according to location. Dry rendered tankage is reported selling in various areas from $1.55 to $1.65 per unit of protein. Wet rendered tankage is quoted at $7.00 to $8.00 per unit of ammonia ($8.51 to $9.72 per unit N) dependent upon quality and test of product offered. Dried blood is held at $6.00 to $6.25 per unit of ammonia ($7.29 to $7.59 per unit N)

(*Continued on page 16*)

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CUT YOUR COSTS WITH
Unexcelled for its superior Dehydrating, Neutralizing, and Curing factors in the preparation of better fertilizers. Write for complete information.
PROMPT SHIPMENTS
Three railroads serve our Carey, Ohio plant--assuring prompt delivery--everywhere.
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We Also Produce
DOLOMITIC HYDRATED LIME (165 TNP)
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KILN DRIED RAW DOLOMITE (107 TNP)
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Baughman

MODEL 0-2 ATTACHMENT
spreads rock phosphate faster and more economically than any other method

Specially designed to prevent material from packing and crusting—perfect for spreading rock phosphate, dry powdered lime and other fertilizing materials.

Spreads from 100 to 5,000 pounds per acre . . . covers 2 acres for every mile traveled at speeds up to 15 mph. Gives uniform spreads on the level, slopes or hillsides. Spreads 16½ feet widths.

The Model 0-2 is 16½' wide . . . folds for highway travel.

"HI-SPEED" LOW COST TRANSPORT

For efficient bulk hauling of superphosphate. Positive belt drive conveyor in bottom of body unloads quickly and with minimum agitation. Compartmentized. Waterproof roof can be installed. Standard sizes—no high cost of special construction.

BAUGHMAN also builds bodies for hauling rock phosphate, limestone and other commercial fertilizers. A model for your every need.

MODEL 235 HOLDS SPREADS TO THE GROUND

For Model K, K-2 and K-3 Bodies . . . prevents wind from scattering spreads. Confines air blast from distributor . . . directs materials outward and groundward. Causes the spread to LAY and STICK. Spreads limestone up to 30 feet . . . phosphate and other fertilizers up to 20 feet. Opens to 18 feet quickly and easily . . . folds for highway travel.

WRITE . . . for complete details of BAUGHMAN fertilizer handling and spreading equipment

MODEL Q PORTABLE CONVEYOR

Loads and unloads from the horizontal to 60°. Capacity up to 40 bu. per minute. Big 9" conveyor screw handles any dry, powdered or granular materials. Available with or without wheels—hundreds of applications.

BAUGHMAN MANUFACTURING CO., Inc.
262 SHIPMAN ROAD, JERSEYVILLE, ILLINOIS
"The Pioneers of the Fertilizer Spreading Industry"

but the best buying interest is not over $5.75 per unit ($6.99 per unit N). Steamed bone meal, 65% B.P. L., is quoted $65.00 to $70.00 per ton and raw bone meal at $60.00 to $65.00.

GENEVA, N. Y.

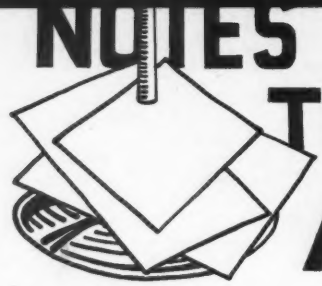
The Sixty-Eighth Annual Report has been issued by the New York State Agricultural Experiment Station, Geneva, N. Y. The book contains brief reports of insect control experiments, tests with fungicides and weed killers.

. . . beet tests

A greater proportion of more profitable small-sized beets has been obtained by stepping up the seeding rate in tests made by the Experiment Station at Geneva, N. Y.

Applying 500 pounds of common salt to the acre in addition to generous applications of a 5-10-10 fertilizer or its equivalent also gave excellent results with the higher rates of seeding used in the Station experiments, says Prof. C. B. Sayre.

NOTES FROM THE FIELD



NEW YORK CITY

American Cyanamid Co. has established a new District Sales office to handle insecticide orders. Insecticide orders should be addressed to American Cyanamid Co., 48 W. 38th St., New York 8, N. Y.

FOREIGN NOTES

On a six-week tour of American agricultural experiment stations, Emile Tilemans, Director of the Station of Phytopharmacy of the Belgian Ministry of Agriculture, Gembloux, Belgium, has been in the U. S. since May 8th under auspices of the E. C. A. Interviewed, Mr. Tileman says he hopes to learn more about the techniques used in American agricultural experiment stations, particularly in reference to herbicides. More than fifty percent of the pesticides used in Belgium, are made in the U. S. He stated that most of the laboratory equipment in use at his station originated in the States.

The function of his station includes not only basic research, but it also performs work similar to that done by the Food and Drug Administration in the U. S. It tests all chemical products before they are allowed to be marketed, and each product is assigned a number which is put on all labels. Thus the 18 inspectors who operate in the country's nine provinces, send samples back to the station at Gembloux, and tests determine whether or not the material agrees with the initial test made before the product was placed on the market.

V-C

V-C fertilizers
Complete Fertilizers Superphosphate
Concentrated Superphosphate
Phospho Plaster Sulphuric Acid

V-C phosphate rock products
Phosphate Rock, Ground and Unground
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The Vicar® Line of Cleansers

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Zycon Fibers

V-C bags
Burlap Bags Cotton Bags
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V-C chemicals
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75% Food Grade
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BIG IN VALUE

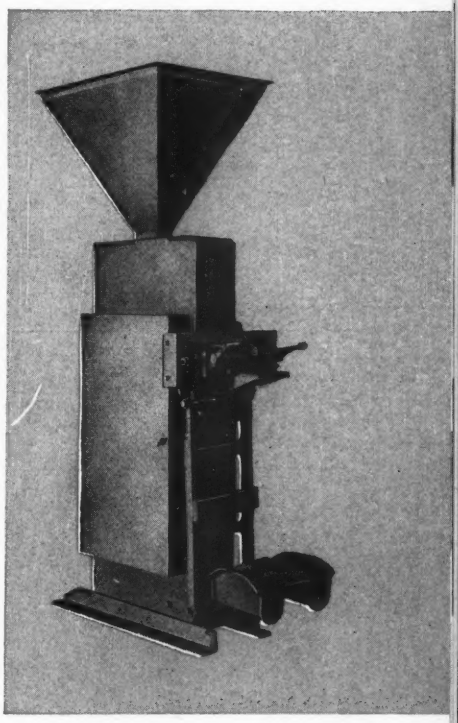
LOW IN PRICE

HERE'S THE PERFECT PACKER FOR THE SMALLER FERTILIZER PLANT!

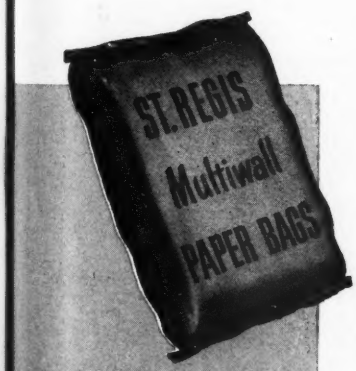
St. Regis does it again! This time it's a filling machine designed, engineered and priced for smaller plants where output does not warrant a machine of great capacity.

Incorporating many of the outstanding features of the larger, more expensive St. Regis packing machines, the new 325-PB is a rugged, dependable, centrifugal belt packer. In actual operation its output averages 18 to 24 tons per hour. Yet only one man operates this machine — a real saving in labor costs!

Use the 325-PB to fill St. Regis Multiwall Paper Bags, and you've got a *proved* and *approved* packaging combination that's sure to keep production *up*, costs *down*.



For complete information on the new, low-priced 325-PB packing machine for smaller fertilizer plants — call or write your nearest St. Regis Sales Office.



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YOU BUY PROTECTION WHEN YOU BUY MULTIWALLS

MAY TAG SALES JUMP

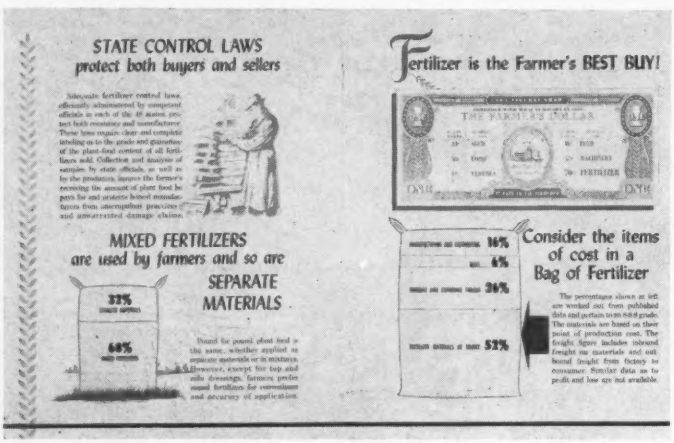
Reports received by The National Fertilizer Association from States having either tax tag or fertilizer sales reporting programs show a higher total equivalent tonnage from January through May of the current year than that reported for the same period of last year. The 13-State total for May—1,109,000 tons—represents an increase of more than 50 per cent over May 1949. This increase places the 1950 cumulative total—for the first time this year—ahead of the corresponding figure for 1949, 6,851,000 tons compared with 6,630,000 tons. The July-May 1949–50 total, however, is about 3 per cent below that of a year earlier.

The Southern States' total for May—980,000 tons—was 56 per cent higher than in May 1949, while the 129,000 tons reported by the 3 Midwestern States represent a gain of 19 per cent.

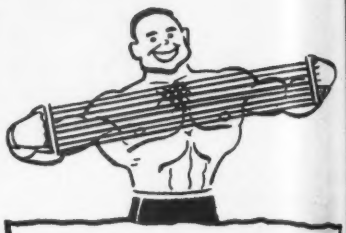
FERTILIZER TAX TAG SALES AND REPORTED SHIPMENTS
(In Equivalent Short Tons)
Compiled by The National Fertilizer Association

State	May		Calender Year Cumulative January–May		Fiscal Year Cumulative July–May	
	1950	1949	1950	1949	1949–50	1948–49
Virginia	66,830	56,841	485,012	477,044	673,440	667,950
N. Carolina	281,413	67,695	1,271,516	1,255,292	1,462,348	1,719,230
S. Carolina	44,791	20,282	693,217	743,662	893,361	979,602
Georgia	55,592	79,499	940,487	988,414	1,157,700	1,248,377
Florida	95,459	69,448	515,579	452,455	984,208	800,629
Alabama	176,317	152,220	753,219	802,242	918,806	988,606
Tennessee	103,499	77,528	311,593	296,068	412,436	437,640
Arkansas	80,942	49,868	260,622	231,720	328,040	320,128
Louisiana	28,011	24,709	193,555	170,903	249,999	240,324
Texas	44,122	31,531	307,414	271,697	523,063	481,003
Total South	979,976	629,621	5,732,164	5,689,497	7,603,401	7,883,489
Indiana	65,145	61,809	437,019	338,228	842,438	845,303
Kentucky	42,720	22,315	389,097	316,793	555,144	528,122
Missouri	21,311	24,019	292,433	285,981	460,417	471,737
Total Midwest	129,176	108,143	1,118,549	941,002	1,857,999	1,845,162
Grand Total	1,109,152	737,764	6,850,713	6,630,499	9,461,400	9,728,651

NOTE: These recommendation should supersede the zinc deficiency control measures given in May by the eastern Washington extension service. In that release dealing with several minor elements, zinc *sulfate* was incorrectly suggested as a foliage spray. Such an application is likely to cause some russeting of fruit.



Shown here are two pages from "Your Future's In The Bag." This very fine 36 page booklet was distributed to the NFA convention group at White Sulphur. It is certainly one of the better pieces of promotional material now available from The National Ferterilizer Association, 616 Continental Bldg., Washington, D. C. If the sample pages shown here interest you why not get further information from NFA headquarters?



The STRONGEST Shipping Bags Made

Your Special Fertilizers need this Special Protection

Bemis WATERPROOF LAMINATED Textile Bags

They're tough!... resist punctures and tears. Your product can travel in any company . . . insects and odors can't infest or contaminate. Unwanted moisture is kept out and needed moisture kept in. These bags can be made resistant to acid, grease and oil. You can't equal the economy of Waterproof Bags for the kind of protection they give.

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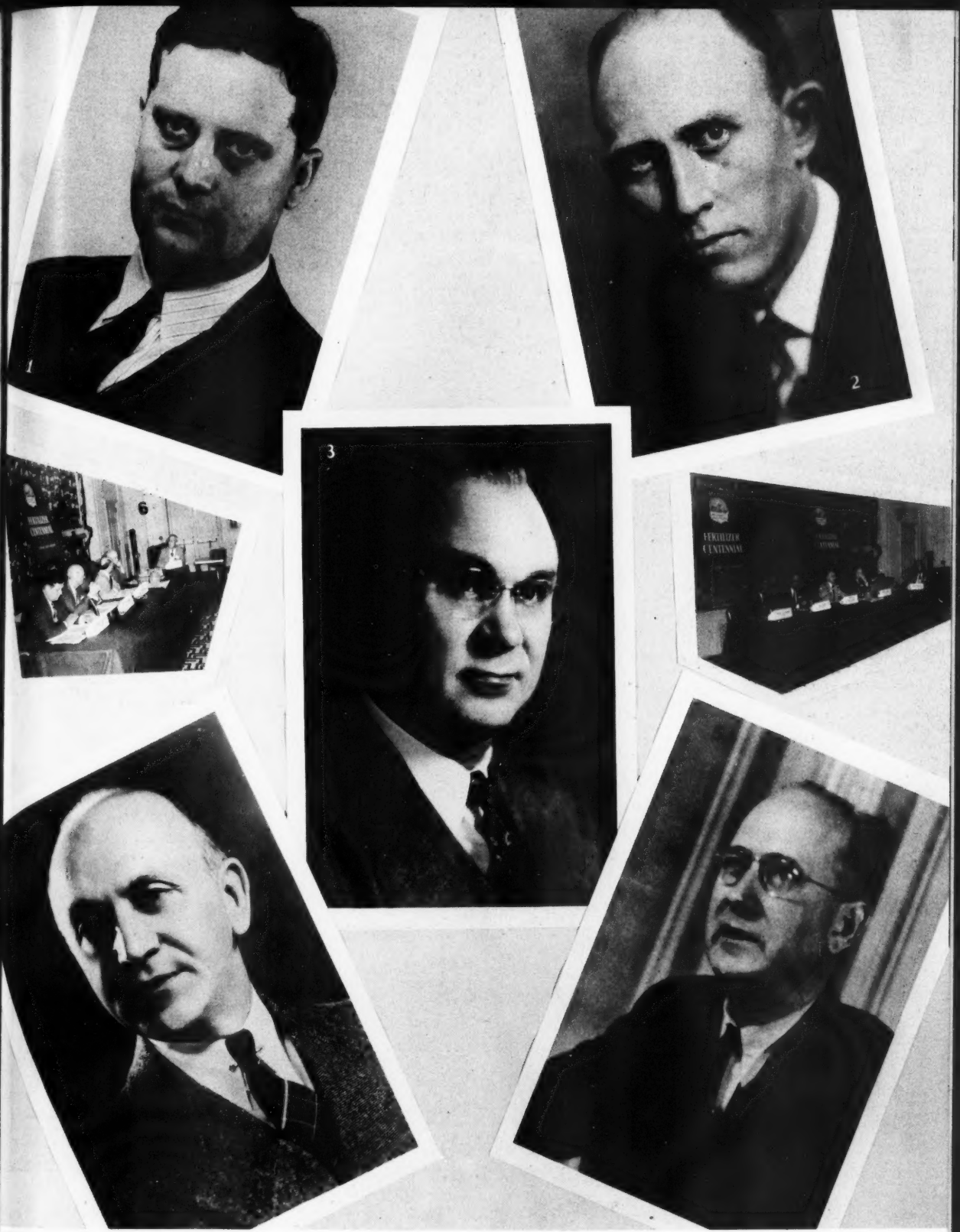


THE QUIZ KIDS HOLD A PANEL DISCUSSION

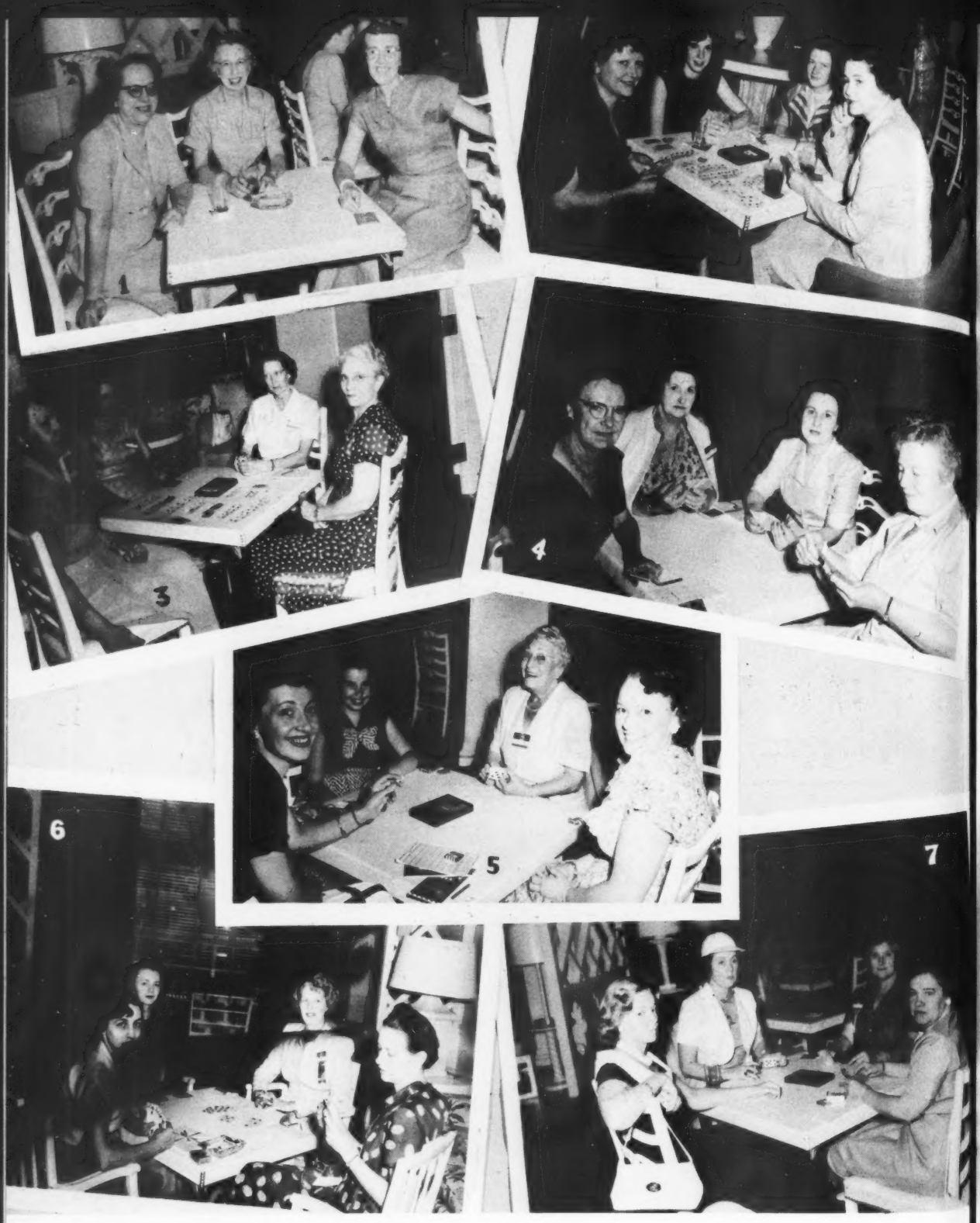
1. H. H. Tucker, Coke Oven Ammonia Research Bureau. 2. K. D. Jacob, U. S. Department of Agriculture. 3. H. B. Siems, Swift & Company. 4. Vincent Sauchelli, Davison Chemical Corporation. 5. S. D. Gray, American Potash Institute. 6 and 7. The Quiz Kids in Action.

HERE AND THERE AT WHITE SULPHUR SPRINGS

1. B. M. Machen, C. J. Ball, H. L. Shelly, J. H. Bryant. 2. L. D. Hand, Weller Noble, B. B. Fall, C. D. Shallenberger. 3 and 4. Senator Allen J. Ellender. 5. Mrs. Harold Trammell, Mrs. J. B. Snyder, Mrs. R. M. Harding. 6. Mrs. T. A. Mitchell, Mrs. J. S. Ure, Mrs. C. W. McNeilly, Mrs. E. N. Shelton. 7. Mrs. W. J. Murphy, Mrs. Lee Turner, Mrs. J. H. Wade, Mrs. A. A. Scholl.

BUSINESS AND RECREATION AT THE GREENBRIER

1. Ralph Robey. 2. H. B. Mann, J. L. Sanders. 3. Mrs. B. M. Machen, Mrs. F. S. Lodge, Mrs. B. A. Ford. 4. Ralph Robey. 5. F. S. Lodge, Mrs. Russell Coleman. 6. Mrs. J. L. Cope, Mrs. J. E. Fletcher, Mrs. M. W. Cole, Mrs. Trenton Tunnell. 7. Mrs. Earl Day, Mrs. F. E. Lange, Mrs. Monroe Hoffman, Mrs. L. G. Black.



PARTICIPANTS IN THE LADIES' BRIDGE AND CANASTA TOURNAMENT

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Use of this material for direct application to the soil has been proved to be both economical and highly efficient in crop production. Accurate chemical control throughout the process of manufacture assures uniformity and high quality in this basic Lion product. Aqua Ammonia, now being used in certain areas for direct application, is also available.

LION Nitrogen Fertilizer Solutions

Made specifically for the manufacturing of mixed goods. This product supplies both ammonia nitrogen and nitrate nitrogen in desirable ratios. Easily handled, and available in three types, designed for varying weather conditions and formula requirements, for the production of fertilizers that cure rapidly, store well and drill efficiently.

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In great demand because of its low unit cost (33.5% guaranteed minimum nitrogen) and superior qualities. The improved spherical white pellets are freer flowing and have increased resistance to caking, with better storing qualities.

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Use of this material enables the manufacturer to produce the high-analysis mixed fertilizers which are increasingly in demand by farmers. In the form of large white crystals which flow freely and resist caking in storage. Shipped in bulk and in 100-pound bags.

Technical advice and assistance to fertilizer manufacturers in solving their manufacturing problems is available for the asking. Just write:

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LION OIL COMPANY
Chemical Division
EL DORADO, ARKANSAS

COLEMAN . . .

(*Continued from page 9*)

laborer to produce more goods and services. Perhaps there would have been little if any development of electricity, few automobiles, radios and airplanes.

Isn't 100 years long enough to convince our people that private industry is a vital and essential part of American government? Isn't 100 years long enough to convince government that its proper place is to regulate and govern, not to dictate and control business affairs; that even good government cannot substitute for self-government? Isn't 100 years long enough to convince labor that its interests are best served where profits are not only high enough to provide for good wages but are also great enough to allow a constant investment in better tools? Isn't 100 years long enough to convince capital that it has a continuing responsibility of improving its products and providing better facilities for its employees?

A New Industry Born

About the time of the industrial revolution a new industry was born, almost unnoticed, in America. Born out of necessity, the fertilizer industry developed as a result of soil depletion and the need of a substitute for labor leaving the farm. In its infancy, fertilizer production was hardly considered an industry in its own right. In its early life, it was dependent upon by-products from other industries for its existence. However, these were not enough. The soil, which was being cleared and mined at a rapid rate, required replacement of its plant food. With people finding better opportunities in cities and moving away from the farms for better jobs, farmers found it necessary to substitute fertilizer and farm machinery for labor. By 1900 the feed industry had begun to compete with fertilizers for the by-products of other industries; thus it became necessary to find other sources of plant food.

The discovery of phosphate rock in 1862 gave the industry new life.

Map of Nitrogen Plants

It grew stronger when a process was developed to synthesize nitrogen from the air, and then reached the age of independence when potash deposits were discovered and developed in California and New Mexico. As a result of these discoveries, our industry has developed into one of the largest chemical industries in America. America's use of these God-given talents has already returned numerous benefits. Larger yields with less labor and more profit to the farmer; better quality food at lower prices to the consumer; an abundance of food and clothing for our national security—these are some of the benefits to which our industry has contributed. Isn't 100 years long enough to convince the American people that the fertilizer industry is essential to their welfare?

There is a cult composed largely of test-tube gardeners who consider chemical inorganic fertilizers unnatural and detrimental to soil and man. Nothing is more ridiculous.

Answer to the Cult

The chemical products used in fertilizers are taken from nature's storehouse and processed by man, just as automobiles are made from processed iron ore and other natural products. The fact is that, despite their exploitation, our soils are producing more today than ever before. Along with an increase in the usage of commercial fertilizers, since 1900 our expected length of life has been extended by 20 years. Are these signs that chemical fertilizers are destroying our Nation? Evidence from medical authorities and from agricultural scientists bears out the absurdity of such organic gardening claims.

Dr. Russell M. Wilder of Mayo Clinic says: "The amount of nitrate in plants normally is certainly insufficient to result in toxicity to human consumers."

Bear Facts

Dr. Firman E. Bear, chairman, Soils Department, Rutgers University, says: "The fertilizer industry represents the most important advance ever made toward providing plenty of food for the peoples of the earth. . . . Without their use, the problems of adequately meeting the food needs of the world's 2,000,000,000 people is essentially insolvable."

This pseudo-religious cult claims that an increase in cancer and heart

(*Continued on page 22*)

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Illustrated are the valve sewn sack, open mouth pasted sack, valve pasted sack, and open mouth sewn sack.

disease is a result of chemicals. The fact is that only in the last 50 years have people lived long enough to acquire old-age diseases. Other peoples who have depended upon nature alone to supply their plant food are still dying of malnutrition at an early age. Organic materials are beneficial and should be returned to the soil but, had our Nation been forced to rely upon organic sources of plant food alone, there would undoubtedly be a shortage rather than an abundant supply of food and clothing today.

Early Accomplishments

The early accomplishments of our industry were made by the individual companies themselves. As its importance increased, the industry recognized the need for a central educational association and the formation of NFA resulted. Although our Association and its predecessors have been in continuous existence for only about a half century, its contributions have been numerous and varied.

1. It has served as an advisor to industry, agriculture and government both in peace and in war.
2. It has supported and encouraged agricultural and industrial research.
3. It has conducted its own educational program and has worked effectively with Federal and State educational organizations.
4. It has been a clearing house for outside agencies desiring information on fertilizers, and an information bureau for Congress.

These, among other activities, remain the primary purposes of the Association.

Before the fertilizer industry can make its maximum contribution to American agriculture there are yet certain fundamental questions which must be answered.

1. To what extent are sound fertilizer practices being followed?
2. What is the potential fertilizer market in the various regions and on the various crops?
3. How can the farmer, who needs help with his fertilizer problems, be reached?

These and many other problems need further study. Your Association is planning to expand its activities to obtain the answer to these and other problems, which will help promote a better fertilizer program both for agriculture and for the industry.

Knowing what combinations of plant-food elements are best for our Nation's soils and continuing to improve our production processes to provide the best possible fertilizer at the lowest possible cost to the consumer represent a constant challenge to our industry. That this challenge has been met in the past is evident. How well our industry meets it in the future will determine whether it is allowed to make its own decisions or whether government controls its activities. Yes, it seems clear that 100 years are long enough to show us that our industry can meet its obligations and I am confident that in the next 100 years history will record another bright centennial for the fertilizer industry.

Habit is a cable: we weave the thread of it every day, and at last we cannot break it.

—Horace Mann

Paragraphics:

A motion picture on "Newest Developments in Machinery for Application of Insecticides," has just been released for general showings by I. G. Ross, Food Machinery & Chemical Corp., John Bean Western Div., San Jose, Cal.

Think selling isn't tough? "Fortune" reports that 20,000 insurance salesmen fail every year. With such a failure rate in only one phase of selling—and if you are making a living—you're practically a genius!

—Alexander Gurwood

Every man is a damned fool for at least five minutes every day. Wisdom consists in not exceeding that limit.

—Elbert Hubbard

A newspaper is an object used by tired men so they can't see a woman standing up in a street car.

—Selected

We Want Letters

We were interested in the recent news that NFA is planning cooperative work with the railway agricultural agents of this country. Letters sent to some 35 leading agents inviting their assistance in helping to promote a sounder agriculture in the United States have brought expressions of eagerness to carry forward the work. Several agents have asked for assistance in staging demonstrations, lending NFA motion pictures, and holding regional meetings.

Forthcoming issues of American Fertilizer will carry railroad feature stories with photographs. We invite correspondence from the R.R. ag agents of America.

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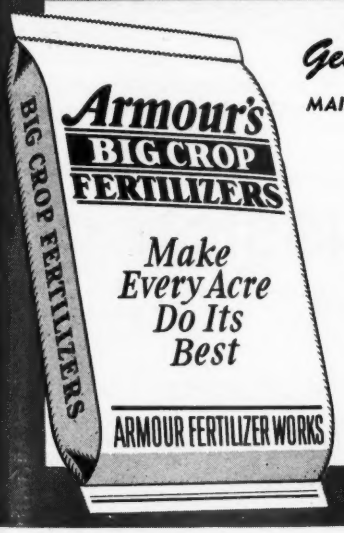

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KING . . .

(*Continued from page 8*)

4 per cent more today than it did 25 years ago. But the greater plant-food content of today's fertilizer means savings in freight and handling costs that more than wipe out this insignificant increase. The price that a farmer pays for a unit of plant food is therefore lower today than it was in 1925.

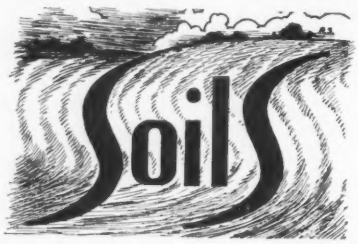
Criticism in regard to the plant-food content of fertilizers, like criticism in regard to other conditions in the fertilizer industry, frequently is voiced by those who are not sufficiently informed to be able to distinguish between the possible and the impossible or between the realistic and the theoretical.

"Fad" Gains Favor

One "fad" that has recently gained some favor among the unknowing is the idea that chemical fertilizers are injurious to plants and animals and that, therefore, plant food should be placed in the soil only through the use of organic and natural sources. We are told that this is Nature's way and it is even intimated that to do otherwise is to go contrary to the law of God. I am reminded of what, according to William Shakespeare, Antonio the Merchant of Venice said on a memorable occasion to his good friend Bassanio: "Mark you this Bassanio, the devil can cite Scripture for his purpose."

The contentions of the "organic cult" have been completely and devastatingly answered by such eminent soil technologists as Prof. Emil Truog of Wisconsin and Dr. Firman E. Bear of New Jersey. I shall not attempt to add to what these authorities have said.

The fertilizer industry has never opposed the use of organics—in fact, it recommends the use of all that are obtainable. If all such materials were used, they could furnish only a fractional part of the plant food now required to raise our crops. The only known way of furnishing our soils with adequate organic matter is to grow it in and on the soil in the form of roots and crop residues. This cannot be done without the use of ample quantities of the vilified chemical fertilizer.



The suggestion has been made, by a critically minded Government agency, that, as a means of reducing mixed fertilizer costs, unnecessary weight be eliminated by the use of materials of high plant-food content and that the resulting mixtures be sold on a plant-food basis.

We must not lose sight of two considerations, which as a matter of fact are mentioned by the agency: (1) it is not practicable to completely eliminate inert materials; and (2) varying costs of different materials which may be used alternatively must be considered along with transportation costs, so that merely increasing the plant-food content of mixtures will not invariably lower the cost per unit of plant food. For instance: depending on what materials are used, there is easily a range of $15 in the cost of manufacturing a ton of 8-8-8 fertilizer. Further, we must not permit an overriding enthusiasm for high-analysis fertilizers to bring about an economic loss that would result from inability to use certain by-product lower-analysis materials. Efforts in the past to sell fertilizer on the suggested plant-food basis have met with very determined buyer resistance.

If mixed fertilizers were manufactured on the suggested basis it would be impossible, because of the varying analyses of fertilizer materials used in making the mixtures, for a mixer to know, except for his current batching, what the grade of his mixture would be, and of course it would be impossible for him to maintain a constant plant-food ratio or content for his product.

To make fertilizer sales on the proposed plant-food basis would necessitate changes in the 48 State fertilizer control laws, all of which are premised in all respects on per-ton sales and, in effect, require that fertilizer be sold on a ton and grade basis and provide severe penalties for failure to meet guaranties—such failure being easily ascertainable on the per-ton setup.

I cannot keep on indefinitely discussing the problems and progress of the fertilizer industry—there just isn't time. I would be remiss in my duty to you, as I am now about to retire from your chairmanship, did I not direct your attention for a moment to a very grave problem which now confronts you and me

(*Continued on page 26*)

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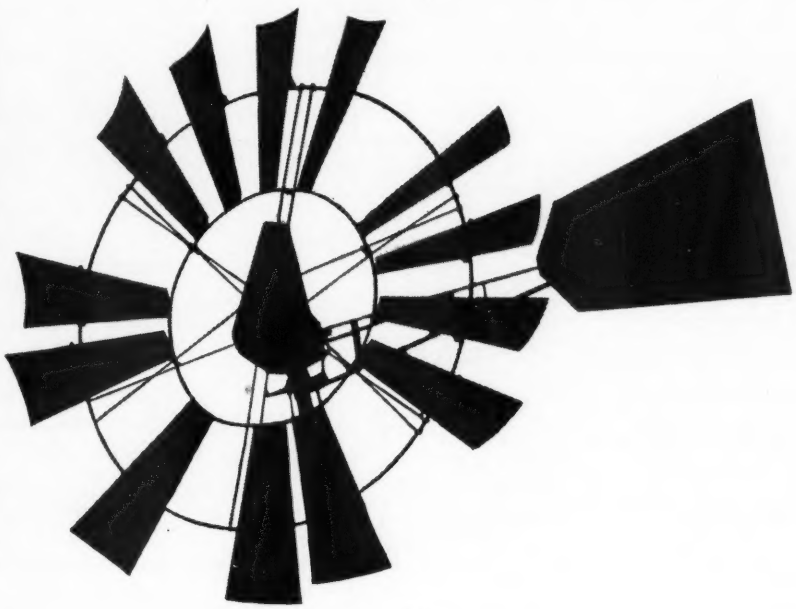
FARM PORTRAIT NO. 6



With missing vanes, it just can't give full power!

You see at a glance what's lacking with this windmill. But, when it comes to a farm where some essential soil ingredient is missing, the lack may not be so immediately apparent — even though actually far more serious.

Many such lacks may be corrected by the wise use of chemical fertilizers — often compounded with potash. In many cases this will be Sunshine State Potash — a product of New Mexico. For potash is not only a vital soil nutrient, but a crop stimulator — helping to resist the inroads of disease and drought — and a firm cornerstone on which to build for increased productivity.

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and all other American citizens more menacingly than ever before.

I refer to the political trend toward a paternalistic super-state which would dominate and control the lives of its citizens, crushing out the spirit of personal independence and self-reliance of its people. As long as Federal money holds out or can be borrowed, this doctrine of promise will sweep from their feet many honest but thoughtless persons who do not look beyond the immediate present, as well as a host of feckless individuals who have a natural antipathy for work and would be content to let others provide them with food and clothing.

I think we will agree on the ultimately devastating effects of such a philosophy of Government, but you and I are prone to stick to our business knitting and let the country run itself. We talk to ourselves and among ourselves, of course, but that is not the kind of talk that is effective. Businessmen must realize that, if our country is to be preserved as the home of private initiative, then they must be willing to give of their time and ability to active participation in political affairs.

Get Across Message

Members of the fertilizer industry, particularly, should be able to get across a message to American farmers. These sturdy sons of the soil have heretofore been the bulwark of a free America. By nature they are conservative and sound thinking. Many of them do not realize that it is quite easy for them unconsciously to sell their birthright for a mess of pottage; that the wholesale acceptance of Federal subsidies must lead to Federal control and involves a surrender of their individual freedom. They should be made to understand that such has been the history of the past and that such will be the history of our nation if this political philosophy prevails.

Our progress in this respect during the past hundred years has been, sadly, backward. We are being led away from the sound basis of personal self-reliance on which America was built. We must get back to that basis, and in so doing it is imperative that we quit spending money we do not have and balance the national budget. Here is an opportunity for you and me to serve ourselves. our children and our children's children.

WINNERS . . .

(*Continued from page 12*)

erals & Chemical Corporation, New York City.

Kickers handicap: Winner, Ralph E. Fraser, Summers Fertilizer Company, Bangor, Me.; runner-up, R. W. Goldthwaite, Lion Oil Company, El Dorado, Ark. Cyanamid Cup: Winner, R. S. Rydell, Swift & Company, Chicago, Ill.

June 13

Low Gross: Winner, Baxter Dungan, Universal Paper Bag Company, New Hope, Pa.; runner-up, E. K. Ludington, Jr., Chase Bag Company, New York City. Medal Play: Winner, H. L. Taylor, Jr., Jacksonville Fertilizer Company, Jacksonville, Texas; runner-up, Charles F. Martin, The Miami Fertilizer Company, Trebein, Xenia, Ohio. Match Play: Winner, Howard C. Peterson, Jr., Arkell & Smiths, Canajoharie, N. Y.; runner-up, J. H. Daughtridge, E. I. du Pont de Nemours & Company, Wilmington, Del. Kickers handicap: Winner, John A. Miller, Price Chemical Company, Louisville, Ky.; runner-up; Morton S. Hodgson, Empire State Chemical Company, Athens, Ga.

•

Veterans: Low Gross: Winner, Weller Noble, Pacific Guano Company, Berkeley, Calif.; runner-up, B. H. Jones, Sunland Industries, Fresno, Calif. Medal Play: First place, Bennett E. Brown, Knoxville, Fertilizer Company, Knoxville, Tenn.; second place, E. F. Schumacher, E. I. du Pont de Nemours & Co., Wilmington, Del.; third place, G. H. Gleason, Barrett Division, Allied Chemical & Dye Corporation, New York City.

•

Guest Golf: Medal Play: Winner, David L. Chambers, Jr.; runner-up, J. P. Mitchell. Kickers handicap: Winner, J. C. Loesel, runner-up, W. A. Webster.

June 14

Low Gross: Winner, Tom Morgan, Agricultural Chemicals, New York City; runner-up, P. J. Gum, Ridge Fertilizer Company, Lake Wales, Fla. Medal Play: Winner, W. J. Murphy, American Potash & Chemical Corporation, New York City; runner-up, F. W. Darner, U. S. Phosphoric Products, Tampa, Fla.

Match Play: Winner, Sydney K. Bradley, Union Bag & Paper Corporation, New York City; runner-up A. Norman Into, International Minerals & Chemical Corporation, Chicago, Ill.

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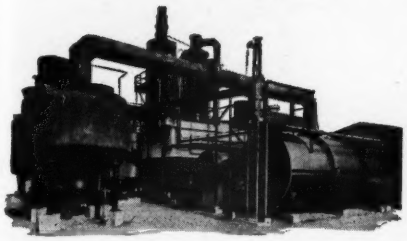

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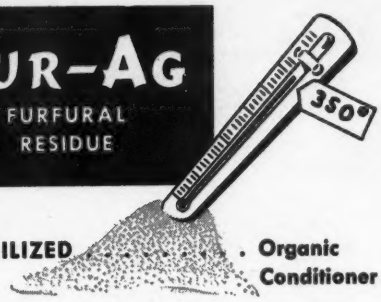

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In addition, FUR-AG has the properties you expect in a good conditioner. It speeds up curing in the pile, helps prevent mixed goods from caking and provides bulk. Best of all, FUR-AG is produced and available in volume the year around. More complete information on request.

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WASHINGTON IN FARMATION

(Exclusive from our Washington Correspondent)

THE N.F.A. had a good meeting at White Sulphur—a record attendance—sessions well planned and conducted—unhappily, some of the speakers had rather thin audiences; we should do better.

☆ ☆ ☆ ☆

SOME POST-CONVENTION ECHOES: This season will wind up in not-too-bad a fashion in spite of last fall's drop in sales and the slow start this spring. For next year numerous contacts expressed a favorable viewpoint, even in face of the reported decline in farm income. For one thing farmers generally are not mired down in their planning as was the case last year at this time when all the uncertainties prevailed with respect to price supports and acreage cuts.

☆ ☆ ☆ ☆

WE HEAR, TO NOW, THAT next season's bookings of ammonium sulphate have not been as large as hoped—on the other hand, producers of ammonium nitrate and potash are reported to be pretty completely booked-up.

☆ ☆ ☆ ☆

WITH THE NUMBER of domestic superphosphate plants now at 200 or thereabouts, some producers are expressing concern whether agriculture can assimilate the potential output. Perhaps these boys did not take in the panel discussion on the first day of the convention or some of the subsequent addresses. However, what we believe is a question of more importance is the rather complicated one relating to plant efficiency in the utilization of various forms of phosphates—or the converse, the efficiency of various forms of phosphates in plant nutrition. For example, is any special advantage or greater nutrient efficiency gained by supplying the phosphate requirements of row crops in the form of water-soluble phosphates rather than others? How about pastures?

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WE HEAR that TVA plans to allot a portion of its ammonium nitrate production to test demonstration work on grasslands this fall. In connection with grassland farming look for announcements of national interest within the near future.

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WIDESPREAD INTEREST is being attached to the Plant Food Educational and Research Foundation announced by NFA and its objectives. After all is said and done one begins to wonder whether our high-level vertical expansion in agricultural production is becoming top heavy and whether it is not now time to place emphasis on the "wise" use of our farming resources.

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If any items mentioned in this column are of special interest to our readers, please write and ask for more news. Address your letters to Washington InFARMation.

MICH. STATE HOLDS DIVISIONAL APS MEETINGS

The North Central Division of the American Phytopathological Society held its summer meeting at Michigan State College, East Lansing, June 22–24, according to announcement by Dr. M. F. Kernkamp, Division secretary. Dr. Donald Cation, program chairman reported that the conference discussed *chemical weed control* as well as *control of various plant disease.* Speakers appearing on the program included B. H. Grigsby, Dr. Cation, Axel Anderson, Ray Nelson, F. C. Strong, Donald DeZeeuw, J. H. Muncie, and H. W. Bockstahler. A business session was in charge of Ralph M. Caldwell, Division president.

The speakers were on the first day's program. The activity of June 23, was a picnic breakfast, and informal dinner. The final day's program included alternate trips to visit muck crops, potato experiments, turf experiments, and other trips in the area.

MONSANTO'S PENTA "WORKING ON RAILROAD"

According to a story from Cleveland, Tenn,, *Penta's* working on the railroad.

Newest "section hand" on the Southern Railway System is a chemical weed killer, Monsanto Chemical Company's pentachlorophenol, commonly called *penta.* Spraying of an initial 500 miles of the railroad's right-of-way began recently.

The chemical, mixed with oil and water, is sprayed over the track in an 18-foot-wide strip. It is estimated that 100 to 150 gallons of the low-cost weed killer will be used on each mile of track.

Unsightly weed growths clog roadbeds and prevent proper drainage of the rock and cinder ballast, sometimes causing ties to settle and track to become uneven. *Penta* was developed originally by the St. Louis company as a wood preservative.

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Annual Convention

(*Continued from page 6*)

Elsewhere in this issue we are printing the remarks of President Russell Coleman and Chairman Ray King. Both of these men had something to say and they had attentive groups who wanted to hear what they thought. Every talk was good at this 1950 meeting, and the comments afterwards in the lobby indicated that certain remarks had started trains of thought along new tracks. There was much evidence of a new and progressive attitude toward the public relations and human relations phases of our industry at this White Sulphur meeting.

One of the other big problems of agriculture was brought out in the remarks of Dr. Robert M. Salter. He said that gains in agriculture realized during the past half century seem small when compared with possibilities of the next 50 years. He pointed out that better use of technology could be made in achieving a balanced agriculture if ways could be found for getting new research developments into use on farms more quickly and if alternate but equally profitable enterprises could be developed for specific areas. As a means to this end, he proposed a nationwide system of pilot research farms, comparable to the pilot plants used in industry, to adapt new technology to the management systems of individual farms.

Reviewing recent progress, Dr. Salter pointed out that the output of the American farm plant in 1949 was twice as great as that of 50 years ago. Moreover, the efficiency of its operation was doubled during the 50-year period. In 1949 one farm worker produced enough for himself and 15 other persons, while in 1900 one worker produced enough for himself and only 7 others.

"Scores of factors contributed to this progress," Dr. Salter said, "but among them all, one stands out in bold relief. It is technological advancement on farms—the product of scientific research."

Pointing out that science has no more than made a beginning in advancing agriculture in the United States, he said: "The forces back of past progress still have unexpended power because farmers generally are now accepting science. Most of them are more than willing to accept the new and better. Not too many years ago many farmers were skeptical of research. Today, however, it is not uncommon to find them peeking over our shoulders to get a lead on what we are finding."

Some of the reasons pointed out for optimism include the fact that science is now "tooled up" with raw materials, devices, and techniques that are speeding up many phases of agricultural research and opening new doors of opportunity. Plant explorers have re-combed areas of ancient civilization for plant materials that may be of value, and the flow of foreign germ plasm to this country has been doubled during recent years.

Only a start has been made in breeding crops with multiple resistance, but progress has been made with wheat, corn, oats, sugar beets, tobacco, and many other crops. The new wheat varieties combine resistance to leaf rust, loose smut, and hessian fly. Small grain breeders are attempting to cross wheat and rye to get the cold resistance of rye into commercial wheat varieties.

"Scientists have only penetrated the fringe in capturing hybrid vigor in crops." Dr. Salter said.

Assistance for Agriculture

Because agriculture is basic in the national economy and fundamental in the general welfare, it should and must be kept active and prosperous, said A. J. Ellender, United States Senator from Louisiana, author of the 1937 AAA act It is nationally hazardous to bleed agriculture, he declared, just as it is economically bad to bleed the soil.

Pointing out that the nation's founders were mostly farmers, Mr. Ellender related the part that government had had in promoting agriculture through departments, land colleges, regional research, and other agencies. Behind all this he saw the necessity of supporting with assurances the faith of the farmer, without which, he declared, the benefits of machinery, fertilizers, pesticides, and plant research could not be realized. Because of the impossibility of planning farm production, provision must be made for taking care of its inevitable excesses, and the burden of that should not fall upon the farmer alone. He should be helped by the people as a whole, because it is to their advantage that agriculture be maintained and that would not be possible under profitless conditions.

Parties

Individual cocktail parties were given by American Potash & Chemical Corporation, H. J. Baker & Bro., International Minerals & Chemical Corporation, and Spencer Chemical Company.

Grassland Fertilization

Much of the session of the association's plant food research committee was devoted to a discussion of the role of the fertilizer industry in the rapidly developing practice of grasslands farming, aptly defined as the marketing of grasses and legumes through livestock. About 12 per cent of the consumption of fertilizers is now in that area. As the growth of the practice is estimated to be due for a five-fold increase in the next ten years, its interest for the fertilizer industry is obvious. especially in its possibilities in leveling the fertilizer season.

The discussion was headed by James A. Naftel, of the Pacific Coast Borax Company, who, pointing to the possibilities of conserving the soil by using it for pasture, asked attention to the problems of getting information and acting upon it to educate farmers, to develop more livestock experience among them and an appreciation of the comparative nutritive values of forage, to get adequate seed supplies; and to develop a practical plan of financing and promoting the idea.

A number of color pictures were shown by M. H. McVickar, NFA agronomist, to illustrate the properties of two clovers and eight grasses and the effect of proper fertilization on their growing. The opportunity for fertilizer sales was stressed by the statement that grassland farming uses 60 per cent of farm acreage but only 12 per cent of the fertilizer consumed. The requirements and potentialities of fertilizers in such farming were related by J. F. Reed, of the American Potash Institute, who said that if only one-half of the 200,000,000 acres of pasturage in the humid areas got proper plant food treatment, it would call for 5,000,000 tons. He told of contemplated increases in pasture acreage, ranging from 15 per cent in the Northeast to 50 per cent in the South, and estimated a place for about 4,500,000 tons of plant food in that move.

Of thirty-four states surveyed, twenty-six have pasturage promotion programs, said B. S. Chronister, of the Barrett Division, Allied Chemical & Dye Corporation. There is a broad trend, he said to finish livestock fattening in the starting areas, instead of in the cornbelt. Mr. Chronister told of the local, state, and section green pastures contests which have been developed over the past few years. He urged the promotion of the growingly popular mass participation in those projects by the fertilizer industry through its dealers in cooperation with county agents. His data on the use of fertilizer and the yield of crops resulting from the contests testified to their business value for both the fertilizer industry and the farmer.

Aside from the pasture programs, the research committee got a report on the winter grazing tour in Mississippi by James A. Naftel, who made the point that local businessmen and civic organizations can cooperate profitably to convert one-crop agricultural communities into profitable grasslands. Plans are being laid for another tour next winter in the Southeast or Texas. There will be a tour of New England in July, if plans are carried through, said S. D. Gray, of the American Potash Institute. The schedule calls for a start from Providence July 10 and the covering of six states, finishing at Portland, Me., July 14. Plans were started and a committee set up for a visit to the Bromfield Malabar farm in Ohio following the 1951 NFA convention. The idea was advanced by H. B. Siems, of Swift & Co., chairman of the committee.

A booklet is being prepared reported, M. V. Bailey, of the American Cyanamid Company, on the terminology of materials and practices in the field of weed control. In reply to a question he said that potassium cyanate was working well as a killer of crabgrass. The association's newest motion picture, "Larger Acres," is nearing completion, said Robert Engle of the agronomic staff. It will foster good agricultural practice.

The NFA Convention at White Sulphur featured some fine exhibits.

American Cyanamid Company, Agricultural Chemicals Division—an assortment of products and a display of pictures of plants and other subjects.

Barrett Division, Allied Chemical & Dye Corporation—a large model of a plant area and related pictures.

E. I. duPont de Nemours & Co., Polychemicals Department—various pictures and diagrams in its multipartite line.

International Minerals & Chemical Corporation—models of plants and samples of products.

Lion Oil Company—pictures of products and a projector exhibit.

Spencer Chemical Company—large model of plant area.

Synthetic Nitrogen Products Company—pictures of applications of products and sheafs of resulting grains.

Tennessee Corporation—an assortment of relevant products.

Textile bag manufacturers (Bannon, Bemis, Chase, Fulton, Morgan, Semmes, Werthan, and Wertheimer companies) — all kinds of heavy-duty and double-duty textile bags.

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